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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,860	08/21/2003	Kenzo Kai	740145-269	6306

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EXAMINER

RAABE, CHRISTOPHER M

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/644,860	Applicant(s) KAI ET AL.	
	Examiner Christopher M. Raabe	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/21/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1,3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Notelteirs (U.S. Patent 3991337), in view of Satterfield (U.S. Patent 3396044).

With regard to claim 1,

Notelteirs discloses a foil seal lamp in which an end of a glass bulb is provided with a seal area, and which comprises: a metal foil of molybdenum which is placed in the seal area, and a molybdenum outer lead, which has a first end connected to the metal foil and a second end that extend out of the bulb (column 1, lines 1-8), wherein a protective coating is provided on the surfaces of both the metal foil and the outer lead in the seal area (column 1, lines 21-22).

Notelteirs does not disclose the protective coating to be of crystalline molybdate, but Satterfield does disclose a protective coating of crystalline molybdate (column 4, lines 50-56).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the crystalline molybdate disclosed by Satterfield into the foil seal lamp of Notelteirs in order to protect the metal surfaces against excessive scaling, oxidation and corrosion (column 1, lines 40-41).

With regard to claim 3,

Notelteirs disclose the foil seal lamp, wherein a protective coating is also provided on an area of the outer lead which projects from the seal area (column 1, lines 21-22).

As in claim 1, Notelteirs does not disclose the protective coating to be of crystalline molybdate, whereas Satterfield does.

Utilizing the reasoning in the rejection of claim 1, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the crystalline molybdate disclosed by Satterfield into the foil seal lamp of Notelteirs.

3. Claims 2,4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Notelteirs in view of Satterfield as applied to claims 1,3 above, and further in view of Gotoh et al. (U.S. Patent 6204454).

With regard to claim 2,

Notelteirs discloses the foil seal lamp.

Notelteirs does not disclose a foil seal lamp wherein the surface of the outer lead in the seal areas is rough. Gotoh et al. do disclose a surface to which a coating is to be applied as being rough (column 1, lines 40-44).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the rough surface of Gotoh et al. into the foil seal lamp of Notelteirs in order to more firmly fix the protective coating to the lead.

With regard to claim 4,

Notelteirs discloses the foil seal lamp.

Notelteirs does not disclose a foil seal lamp wherein at least the area of the outer lead which projects from the seal area is rough. As in the rejection of claim 2, Gotoh et al. do disclose a surface to which a coating is to be applied as being rough.

Utilizing the reasoning in the rejection of claim 2, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the rough surface of Gotoh et al. into the foil seal lamp of Notelteirs.

With regard to claim 5,

Notelteirs discloses the foil seal lamp.

Notelteirs does not disclose a foil seal lamp wherein the surface roughness is from 0.20 to 0.51 μm . As in the rejection of claim 2, Gotoh et al. do disclose a surface to which a coating is to be applied as being rough.

Utilizing the reasoning in the rejection of claim 2, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the rough surface of Gotoh et al. into the foil seal lamp of Notelteirs.

With regard to claim 6,

Notelteirs discloses the foil seal lamp.

Notelteirs does not disclose a foil seal lamp wherein the surface roughness is from 0.20 to 0.51 μm . As in the rejection of claim 2, Gotoh et al. do disclose a surface to which a coating is to be applied as being rough.

Utilizing the reasoning in the rejection of claim 2, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the rough surface of Gotoh et al. into the foil seal lamp of Notelteirs.

4. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Notelteirs in view of Satterfield as applied to claim 1 above, and further in view of Goettler (U.S. Patent 6218324).

With regard to claim 7,

Notelteirs discloses the foil seal lamp.

Notelteirs does not disclose molybdate having one of a wolframite or a scheelite crystal structure. Goettler does disclose molybdate having one of a wolframite or a scheelite crystal structure (Table 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the crystal structure disclosed by Goettler into the foil seal lamp of Notelteirs in order to protect the leads from a corrosive environment (column 9, lines 34-40).

With regard to claim 8,

Notelteirs discloses the foil seal lamp.

Notelteirs does not disclose an element in addition to oxygen and molybdenum of the crystalline molybdate being selected from at least one of the elements of the group consisting of magnesium, calcium, strontium, barium, manganese, cobalt, nickel, titanium, scandium, yttrium, lanthanum, cerium, praseodymium, neodymium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, and lutetium.

As in the rejection of claim 7, Goettler discloses an element in addition to oxygen and molybdenum of the crystalline molybdate being selected from at least one of the elements of the group consisting of magnesium, calcium, strontium, barium, manganese, cobalt, nickel, titanium, scandium, yttrium, lanthanum, cerium, praseodymium, neodymium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, and lutetium.

Utilizing the reasoning in the rejection of claim 7, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the composition of the molybdate disclosed by Goettler into the foil seal lamp of Notelteirs.

With regard to claim 9,

Notelteirs discloses the foil seal lamp.

Notelteirs does not disclose the use of one of the molybdates MnMoO_4 , MgMoO_4 , SrMoO_4 , and $(\text{Ni--Mn})\text{MoO}_4$. As in the rejection of claim 7, Goettler discloses the use of one of the molybdates MnMoO_4 , MgMoO_4 , SrMoO_4 , and $(\text{Ni--Mn})\text{MoO}_4$.

Utilizing the reasoning in the rejection of claim 7, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the composition of the molybdate disclosed by Goettler into the foil seal lamp of Notelteirs.

With regard to claim 10,

Notelteirs discloses the foil seal lamp.

Notelteirs does not disclose the protective coating having a ratio of an x-ray diffraction intensity ratio of the crystalline molybdate to the ratio of the x-ray diffraction intensity of the other produced compounds that is at least 50%. Goettler does disclose the protective coating having a ratio of an x-ray diffraction intensity ratio of the crystalline molybdate to the ratio of the x-ray diffraction intensity of the other produced compounds that is at least 50% (column 9, lines 34-40, and column 10, lines 20-27 (implies no others present, hence ratio is significantly over 50%)).

Utilizing the reasoning in the rejection of claim 7, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the composition of the molybdate disclosed by Goettler into the foil seal lamp of Notelteirs.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents 3562023, 3052575, 3726694, 3926761, 4385940, and Pre-grant Publication 2002/0151635.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Raabe whose telephone number is 571-272-8434. The examiner can normally be reached on m-f 7am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2879

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CR


ASHOK PATEL
PRIMARY EXAMINER